



California Energy Commission

# **Comparison of California Energy Demand (CED) 2009 and 2007 Forecasts**

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## **2009 and 2007 Forecast Comparison: Outline of Presentation**

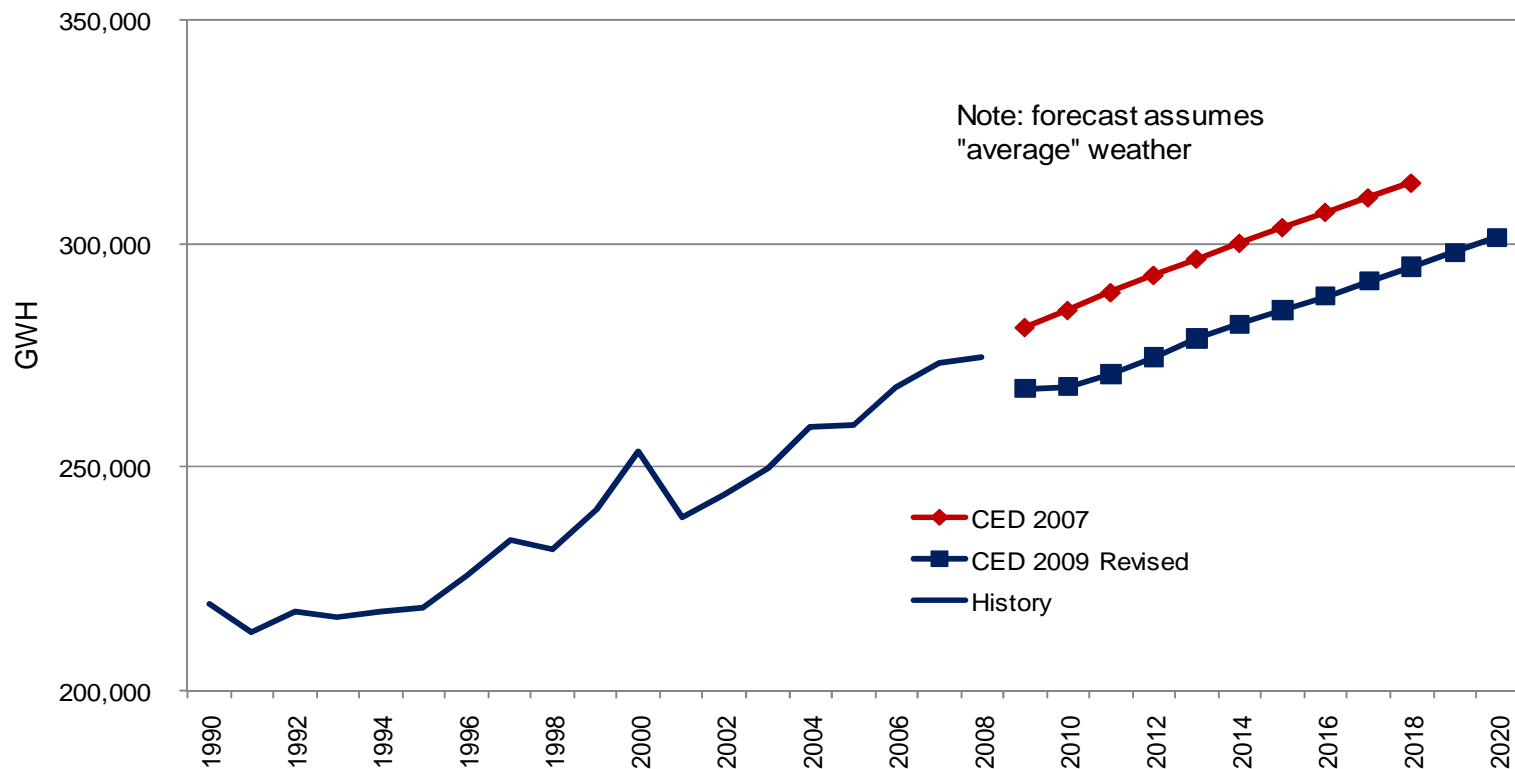
- Forecast results
- Factors accounting for difference in electricity sales
- Difference in economic growth assumptions
- Difference in efficiency impacts
- Other differences



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# Statewide Electricity Sales

6% Below 2007 Forecast in 2018, same growth rate after 2010





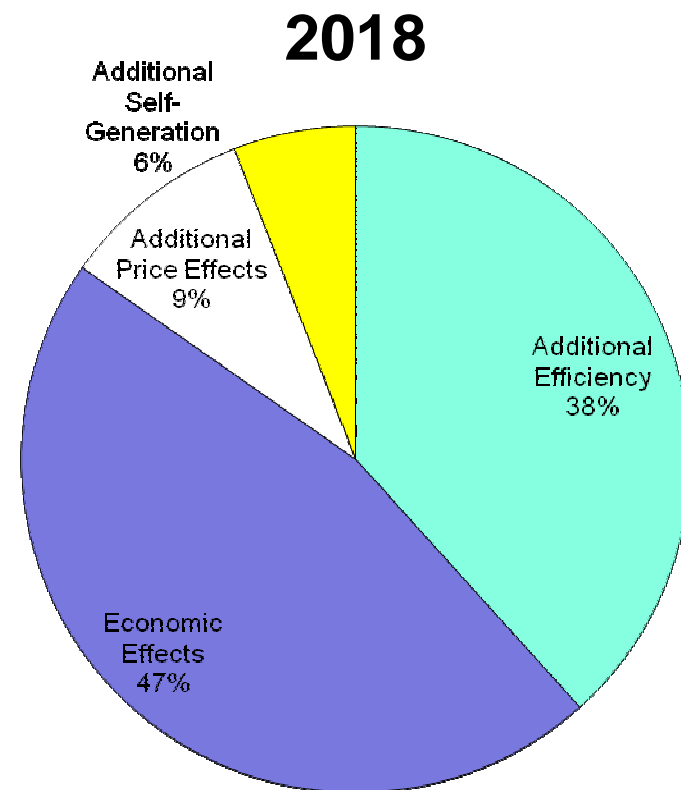
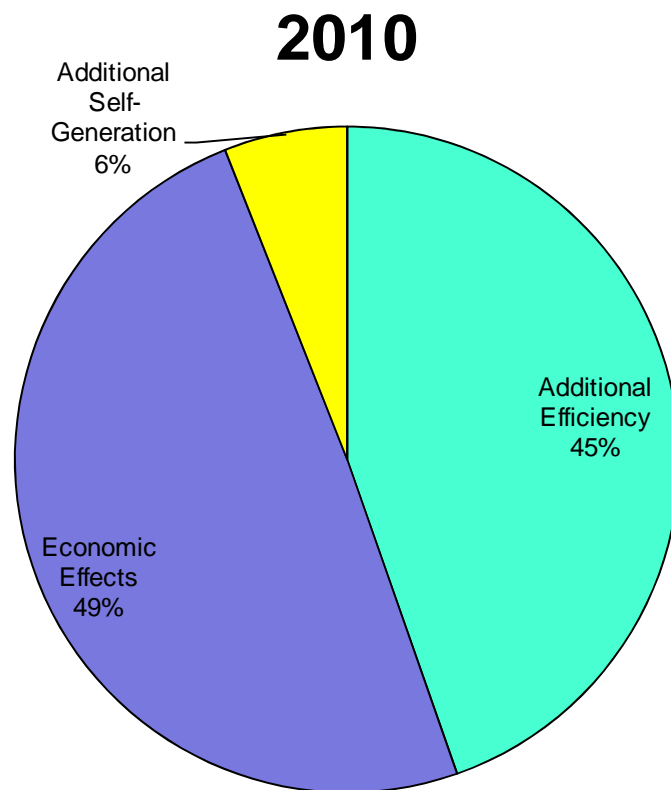
## Factors Accounting for Difference in 2009 and 2007 Forecasts

- Downturn in Economy
- Increased Energy Efficiency
  - Utility Program Impacts (incorporates 2010-2012 utility program cycle not committed in 2007)
  - Building and Appliance Standards
  - Additional Residential Lighting Savings
- Rate Increase (15% from 2010-2020)
- Increased Self-Generation



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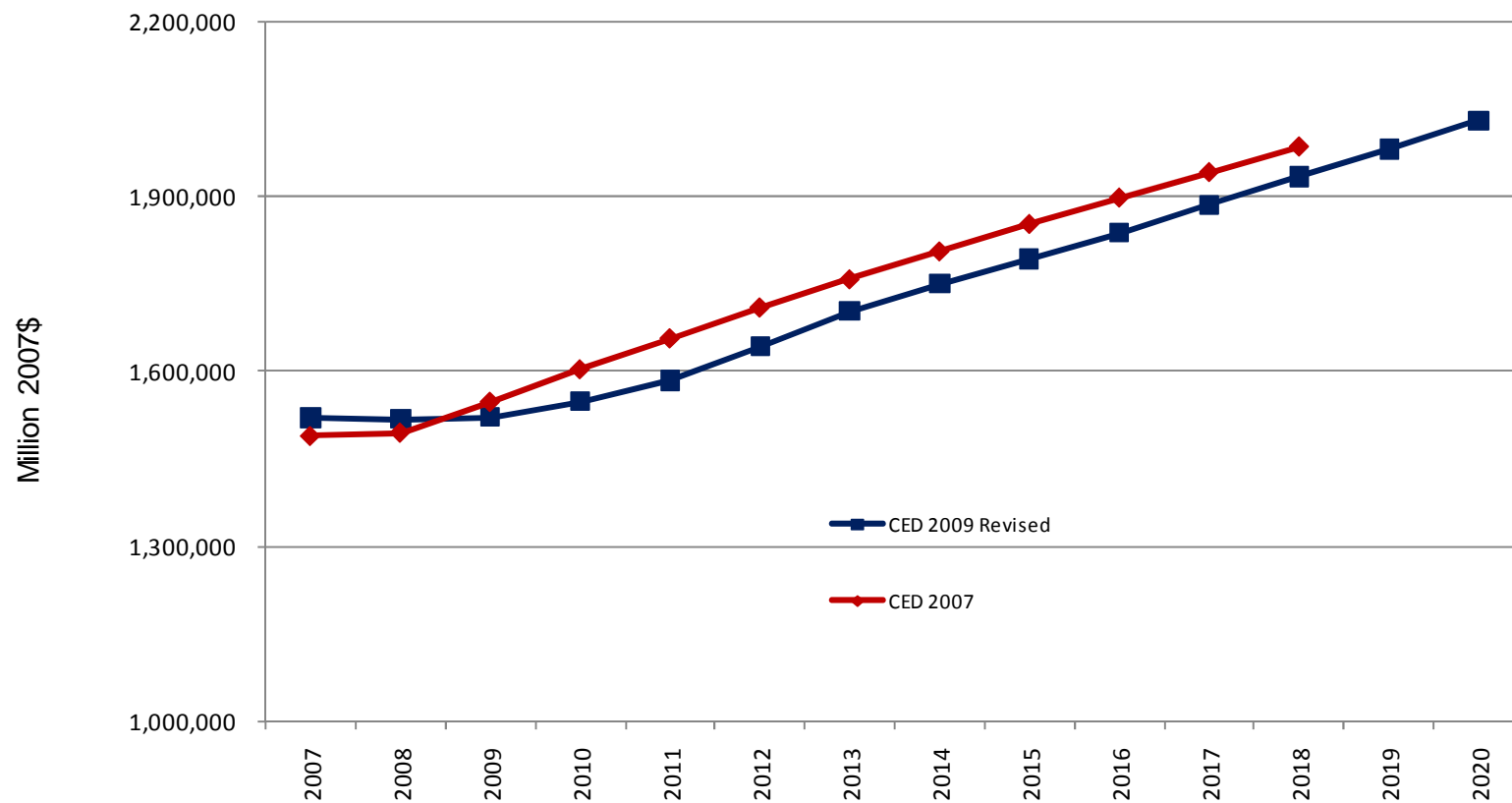
# Sources of Sales Difference (Net of Electric Vehicles)





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# Economic Growth: Personal Income Down 2.6% in 2018 vs. CED 2007



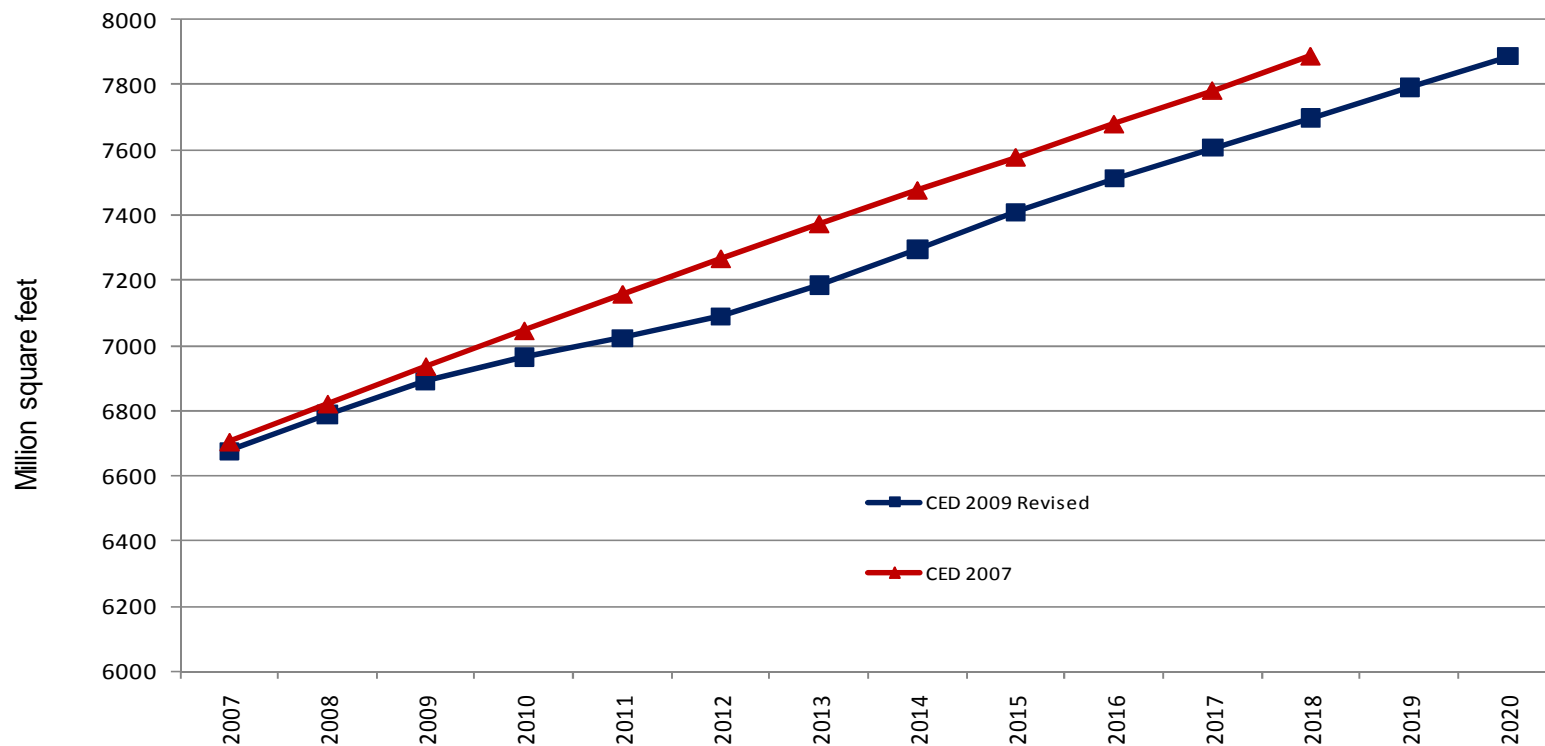
Source: California Energy Commission, 2009



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# Economic Growth: Commercial Floor Space

Down 2.4% in 2018 vs. CED 2007



Source: California Energy Commission, 2009



# Additional Efficiency Impacts

- Includes projected utility program impacts from 2010-2012 CPUC program cycle. These projected impacts not considered “committed” in 2007 forecast.
- Increased program impacts for 1998-2009 from major effort to re-estimate historical impacts
- Increased building standards impacts: assumption of higher compliance with 2005 commercial lighting standards and from 2002 refrigerator standards
- Additional residential lighting savings come from assumption of continued savings after 2012

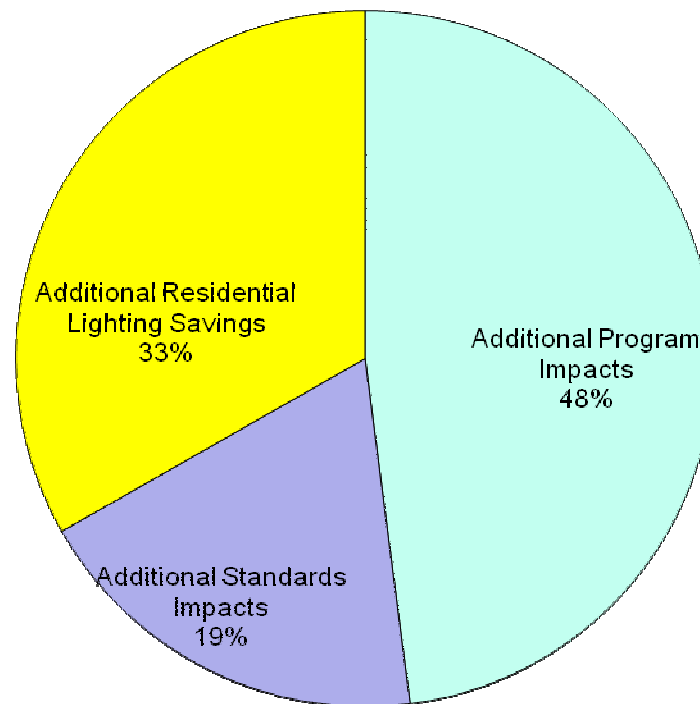


# Additional Efficiency Impacts

- Increase in total efficiency savings vs. 2007 forecast is 7,700 GWH in 2010, 9,400 GWH in 2018
- In 2010, almost all of the increase (94%) comes from more utility program impacts (the rest from more standards impacts)
- In 2018, increase comes from programs and standards, along with additional residential lighting savings (~3,100 GWH in 2018)



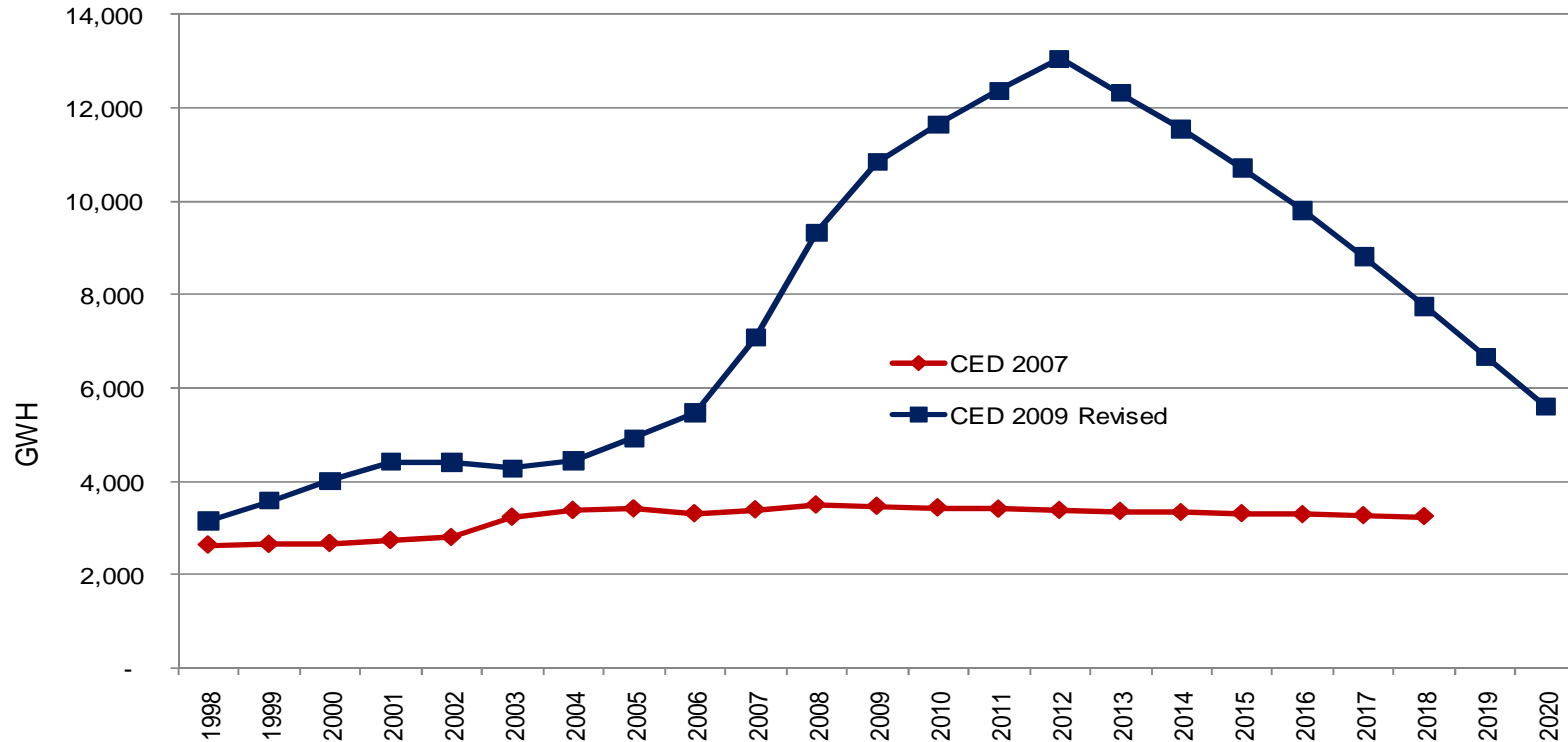
## Sources of Additional Efficiency Impacts, 2018





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# Comparison of Statewide Utility Program Impacts 9,700 GWH difference in 2012





## Other Sources of Difference in Forecasts

- Additional 1,700 GWH in reduced electricity use in 2009 forecast in 2018 from price effects (15% rate increase 2010-2020, flat rates in 2007 forecast)
- Additional self-generation:
  - Additional 1,000 GWH generation in 2010
  - Additional 1,400 GWH generation in 2018
  - Due mainly to increased photovoltaic system penetration vs. 2007 forecast



## Uncommitted Efficiency Savings

- Other potential electricity savings from future programs and standards not included in 2009 forecast:
  - Utility programs 2013-2020
  - Huffman Bill, federal lighting legislation
  - 2010 Title 24 update
  - CPUC “Big and Bold” initiatives
- This potential included in ongoing CEC uncommitted analysis (complete January, 2010) for CPUC long-term procurement



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### Summary: Implication for Renewables, 2020 Sales subject to RPS (excludes water agencies)

